

CM I Claim:

Claims

1. Apparatus for a vehicle having at least the following two structural elements, a transverse axle and a body comprising, on each side of the vehicle, a chamber partially filled with hydraulic fluid, a movable piston at one end of and within said
 5 chamber and attached to one of said structural elements; the other end of said chamber being attached to the other of said structural elements of the vehicle; a fixed plate within said chamber having a sealable opening to separate fluid within said chamber into two portions above and below said fixed plate; sealing means within said chamber adapted to seal said sealable opening; a steering wheel disposed between the two sides of the vehicle
 10 within a steering column rotatable through an angle from 0 to 180 degrees; sensing means within said steering column to sense rotation of said steering wheel and a pre-set minimum speed of said vehicle, such that when rotation of said steering wheel is ^{BELOW} ~~beyond~~ about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed, said sensing means will send a signal to said sealing means; thereby, when activated by
 15 said sensing means, said sealing means will seal said sealable opening in said plate to prevent flow of said fluid from one portion to the other portion of said chamber, whereby tilting of one of said structural elements toward said other structural element is prevented.

2. Apparatus for a vehicle having at least the following two structural elements, a transverse axle and a body comprising, on each side of the vehicle, a chamber
 20 being partially filled with hydraulic fluid; a movable piston at one end of and within said chamber and attached to one of said structural elements; the other end of said chamber being attached to the other of said structural elements of the vehicle; a fixed plate within said chamber having a sealable opening to separate said fluid within the chamber into two portions above and below said fixed plate; sealing means within said chamber adapted to
 25 seal said sealable opening; wheels mounted at each end of said axle and sensing means placed at the front and back of said axle adapted to sense the turning of said wheels to the right and left and to sense a pre-set minimum speed of said vehicle; such that when said sensing means senses a turn below about 20 degrees or above about 160 degrees at or above said pre-set minimum speed; said sensing means will send a signal to said sealing
 30 means; thereby, when activated by said sensing means, said sealing means will seal said sealable opening in said separating means to prevent flow of said fluid from one portion to the other portion of said chamber, whereby tilting of one of said structural elements toward said other structural element is prevented.

3. ~~Apparatus as in Claim 5 wherein said sensing means is also~~
 35 adapted to sense a pre-set maximum speed of said vehicle so as to activate said sensing means at a lower angle of rotation of said steering wheel than 160 degrees.

SLs
2/5/98

4. Apparatus as in ~~Claim 6~~ wherein said sensing means is also adapted to sense a pre-set maximum speed of said vehicle so as to activate said sensing means at a lower turning angle of said wheels than 160 degrees.

5. Apparatus for a vehicle having at least the following two structural elements, a transverse axle and a body; a suspension system disposed between said two structural elements on each side of said vehicle; a steering wheel disposed between the two sides of said vehicle within a steering column rotatable through an angle from 0 to 180 degrees; sensing means within said steering column to sense rotation of said steering wheel at a pre-set minimum speed of said vehicle, such that when rotation of said steering wheel is ^{BELOW} ~~beyond~~ about 20 degrees or beyond about 160 degrees, at or above said pre-set minimum speed, said sensing means will send a signal to said suspension system whereby the rate of movement of said one structural element, said body, toward said other structural element, said axle, is reduced sufficiently to prevent further tilting of one of said structural elements toward said other structural element is prevented.

6. Apparatus for a vehicle having at least the following two structural elements, a transverse axle and a body; a suspension system disposed between said two structural elements on each side of said vehicle; wheels mounted at each end of said axle and sensing means placed at the front and back of said axle adapted to sense the turning of said wheels to the right and left and to sense a pre-set minimum speed of said vehicle such that when said sensing means senses a turn below about 20 degrees or above about 160 degrees at or above said pre-set minimum speed, said sensing means will send a signal to said suspension system whereby the rate of movement of said one structural element, said body, toward said other structural element, said axle, is reduced sufficiently to prevent further tilting of one of said structural elements toward said other structural element.

7. A vehicle having a suspension system disposed between a transverse axle and a body of said vehicle wherein the vehicle is equipped with means for controlling the suspension system, the improvement comprises means for sensing angular or steering movement of said vehicle and means for activating said means for controlling said suspension system at a pre-set angle of movement of said vehicle depending upon the speed of the vehicle to convert the normally fast rate of movement of the body toward said axle to a slower rate of movement of said body toward said axle.